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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,758	10/11/2001	Kazuyuki Kabe	OGW-0047	7175

7590 09/01/2005

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EXAMINER
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CRAIG, DWIN M

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/973,758

Applicant(s)

KABE ET AL.

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-3 and 5 have been presented for reconsideration based on Applicant's amended claim language and arguments.

#### Response to Arguments

2. Applicants' arguments presented in the 5-19-2005 response have been fully considered.

The Examiner's response is as follows,

2.1 Regarding the Applicants' response to the 35 USC § 102(b) rejections of claims 1-3, 5 and 6. The Examiner has found the amended claims to be allowable over the prior art and withdraws the earlier 35 USC § 102(b) rejections of the claims.

#### Claim Rejections - 35 USC § 101

3. Claims 1-3 and 5 are rejected under 35 USC § 101.

3.1 The claimed invention is directed to non-statutory subject matter. For example, the following claimed invention, using independent claim 1 as an example, "A method of designing rubber composite comprising the steps of:" in combination with "dividing the rubber composite into many finite elements and calculating strain in each element by the finite element method to obtain maximum principal strain  $(\epsilon_i)_{max}$  of the elements in each part(i)." is describing a process that is disembodied and merely algorithmic where these method claims could be implemented through mental steps and/or constructed on paper with pencil, and are not limited to being performed by a computer or a machine. See *In re Meyer and Weissman*, 215 USPQ193 (CCPA 1982), *In re Walter*, 205 USPQ 397 (CCPA 1980), *Aeshal v United States* 208 USPQ 397 (US ClCt 1980), *In re Sarkar* 200, USPQ 132 (CCPA 1978), *In re Musgrave*, 431 F.2<sup>nd</sup> at 893 167

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USPQ 280(CCPA 1970) and In re Foster, 438 F.2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971). (See also section 2106 of the MPEP).

The Examiner notes the following; Applicants' have support in the specification on page 8 for running a simulation on a computer. This rejection could be overcome by amending the method claims to include language like: "A computer implemented method".

#### Allowable Subject Matter

4. Claims 1-3 and 5 are allowed.

4.1 The following is a statement of reasons for the indication of allowable subject matter:

As regards independent claim 1, the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art.

*"Repeating the tentative selections of the shape of the rubber composite, the shape of each part (i) and the physical properties of the rubber material and the calculations by the finite element method until an allowance ratio  $S_{ia}$  calculated as a ratio of strain  $(\epsilon_i)_b$  at break to the maximum principal strain  $(\epsilon_i)_{max}$  becomes equal to a specified reference allowance ratio  $S_0$  or higher in all parts (i); and"* in combination with *"wherein the reference allowance ratio  $S_0$  is set in a range of 9 to 30."*

As regards independent claim 2 the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art.

*"Repeating the tentative selections of the shape of the rubber composite, the shape of each part (i) and the physical properties of the rubber material and the calculations by the finite element method until an allowance ratio  $S_{ib}$  calculated as a ratio of strain  $(\sigma_i)_b$  at break to the*

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*maximum principal stress  $(\sigma_i)_{max}$  becomes equal to a specified reference allowance ratio  $S_0$  or higher in all parts (i); and” in combination with “wherein the reference allowance ratio  $S_0$  is set in a range of 9 to 30.”*

As regards independent claim 3 the following limitations, in combination with other limitations is neither anticipated nor made obvious by the prior art.

*“ Repeating the tentative selections of the shape of the rubber composite, the shape of each part (i) and the physical properties of the rubber material and the calculations by the finite element method until an allowance ratio  $S_{ic}$  calculated as a square root of a ratio of density  $(\Pi_i)_b$  of strain energy at break to the maximum strain energy density  $(\Pi_i)_{max}$  becomes equal to a specified reference allowance ratio  $S_0$  or higher in all parts (i); and” in combination with “wherein the reference allowance ratio  $S_0$  is set in a range of 9 to 30.”*

If Applicant amends claims 1-3 to overcome the outstanding 101 issues these claims will be allowed.

4.2 Dependent claim 5 is allowed as this claim depends upon an allowed base claim however, it is noted that until the independent claims are directed towards statutory subject matter dependent claim 5 cannot go to issue.

### Conclusion

5. This Office Action is Non-Final. Claims 1-3 and 5 are rejected.


5.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC

  
Paul L. Rodriguez 8/26/05  
Primary Examiner  
Art Unit 2125